

Laucks

Testing Laboratories, Inc.

940 South Harney St., Seattle, Washington 98108 (206)767-5060



Certificate

Chemistry, Microbiology, and Technical Services

CLIENT Alaskan Copper Works
P. O. Box 3546
Seattle, WA 98124
ATTN: Jim Brown

LABORATORY NO. 89533

DATE May 1, 1985

PO# A5580

REPORT ON NITRIC ACID

SAMPLE
IDENTIFICATION

Submitted 4/29/85 and identified as shown below:

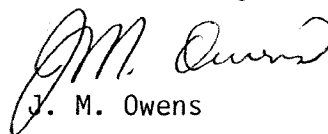
3600-A5580

TESTS PERFORMED
AND RESULTS:

Nitric Acid, % ----- 11.1

Respectfully submitted,

Laucks Testing Laboratories, Inc.


J. M. Owens

JMO:bg



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AKC-0015827

Laucks

Testing Laboratories, Inc.

940 South Harney St., Seattle, Washington 98108 (206)767-5060



Certificate

Chemistry, Microbiology and Technical Services

CLIENT Alaskan Copper Works
P. O. Box 3546
Seattle, WA 98124
ATTN: Jim Brown

LABORATORY NO. 89695

DATE May 17, 1985

PO# A5673

REPORT ON NITRIC ACID

SAMPLE
IDENTIFICATION

Submitted 5/8/85 and identified as shown below:

ID #3200 A5673

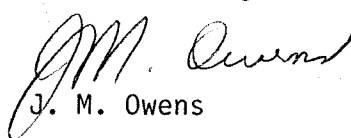
TESTS PERFORMED
AND RESULTS:

Nitric Acid, % ----- 9.5

Specific Gravity at 72°F ----- 1.219

Respectfully submitted,

Laucks Testing Laboratories, Inc.


J. M. Owens

JMO:bg



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AKC-0015828

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Certificate

Chemistry, Microbiology, and Technical Services

CLIENT Alaskan Copper Works
P.O. Box 3546
Seattle, WA 98124
ATTN: Jim Brown

LABORATORY NO. 90179

DATE June 20, 1985

P.O. # 5905

REPORT ON METRO WASTE

SAMPLE
IDENTIFICATION

Submitted 6/13/85 and identified as shown below:

Metro Waste Discharge ID # 3600-A5905

TESTS PERFORMED
AND RESULTS:

parts per million (mg/L)

Zinc	0.030
Chromium	0.009
Copper	0.028
Nickel	0.01

Respectfully submitted,

Laucks Testing Laboratories, Inc.


J. M. Owens

JMO:rw



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AKC-0015829

Laucks

Testing Laboratories, Inc.

940 South Harney St., Seattle, Washington 98108 (206)767-5060



Certificate

Chemistry, Microbiology, and Technical Services

CLIENT Alaskan Copper Works
P.O. Box 3546
Seattle, WA 98124
ATTN: Jim Brown

LABORATORY NO. 90180

DATE June 20, 1985

P.O. # 6906

REPORT ON METRO WASTE

SAMPLE
IDENTIFICATION

Submitted 6/13/85 and identified as shown below:

Metro Waste Discharge ID # 3200-A5906

TESTS PERFORMED
AND RESULTS:

parts per million (mg/L)

Zinc	0.11
Chromium	3.0
Copper	1.4
Nickel	1.0

Respectfully submitted,

Laucks Testing Laboratories, Inc.

G. M. Owens

JMO:rw



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AKC-0015830

Laucks

Testing Laboratories, Inc.

940 South Harney St., Seattle, Washington 98108 (206)767-5060



Certificate

Chemistry, Microbiology, and Technical Services

CLIENT Alaskan Copper Works
P. O. Box 3546
Seattle, WA 98124
ATTN: Jim Brown

LABORATORY NO. 90177

DATE June 25, 1985

P.O. # 5904

REPORT ON NITRIC ACID

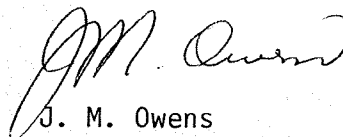
SAMPLE IDENTIFICATION Submitted 6/13/85 and identified as shown below:

TESTS PERFORMED AND RESULTS:
1) ID #3600 - A5904
2) ID #3200 - A5904

	<u>1</u>	<u>2</u>
Nitric Acid, %	10.0	5.6
Specific Gravity at 72°F	1.112	1.211

Respectfully submitted,

Laucks Testing Laboratories, Inc.


J. M. Owens

JMO:rw



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AKC-0015831

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Chemistry, Microbiology, and Technical Services



Certificate

CLIENT Alaskan Copper Works
P. O. Box 3546
Seattle, WA 98124
ATTN: Jim Brown

LABORATORY NO. 90551

DATE July 11, 1985

P.O. #A6100

REPORT ON NITRIC ACID

SAMPLE
IDENTIFICATION

Submitted 7/9/85 and identified as shown below:

ID #3200 - A6100

TESTS PERFORMED
AND RESULTS:

Nitric Acid, % ----- 4.2

Specific Gravity at 72°F ----- 1.147

Respectfully submitted,

Laucks Testing Laboratories, Inc.

J. M. Owens

JMO:rw



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Certificate

Chemistry, Microbiology, and Technical Services

CLIENT Alaskan Copper Works
P. O. Box 3546
Seattle, WA 98124
ATTN: Jim Brown

LABORATORY NO. 90552

DATE July 18, 1985

P.O. #A6101

REPORT ON WASTE WATER

SAMPLE IDENTIFICATION Submitted 7/9/85 and identified as shown below:

ID #3200 - A6101

TESTS PERFORMED
AND RESULTS:

RECEIVED

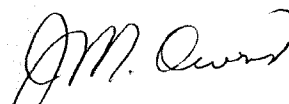
AUG 15 REC'D

MAINTENANCE

Zinc, parts per million (mg/L)	-----	0.30
Chromium, parts per million (mg/L)	-----	1.7
Copper, parts per million (mg/L)	-----	0.80
Nickel, parts per million (mg/L)	-----	1.1

Respectfully submitted,

Laucks Testing Laboratories, Inc.


J. M. Owens

JMO:rw



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AKC-0015833

Laucks

Testing Laboratories, Inc.

940 South Harney St., Seattle, Washington 98108 (206)767-5060

Chemistry, Microbiology and Technical Services



Certificate

CLIENT: Alaskan Copper Works
P. O. Box 3546
Seattle, WA 98124
ATTN: Jim Brown

LABORATORY NO. 92508

DATE: Aug. 29, 1985

PO# A6434

REPORT ON: WASTE DISCHARGE

SAMPLE
IDENTIFICATION

Submitted 8/16/85 and identified as shown below:

ID# 3200-A6434

TESTS PERFORMED
AND RESULTS:

parts per million (mg/L)

Zinc -----	0.028
Chromium -----	0.30
Copper -----	0.078
Nickel -----	0.16

RECEIVED

SEP 3, P.M.

MAINTENANCE

Respectfully submitted,

Laucks Testing Laboratories, Inc.

Mike Nelson

MN:1aj



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AKC-0015834

Laucks

Testing Laboratories, Inc.

940 South Harney St., Seattle, Washington 98108 (206)767-5060



Certificate

Chemistry, Microbiology, and Technical Services

CLIENT Alaskan Copper Works
P. O. Box 3546
Seattle, WA 98124
ATTN: Jim Brown

LABORATORY NO. 92509

DATE Sept. 5, 1985

P.O. #A6433

REPORT ON NITRIC ACID

SAMPLE
IDENTIFICATION

Submitted 8/16/85 and identified as shown below:

ID #3200 - A6433

TESTS PERFORMED
AND RESULTS:

Nitric Acid, % ----- 5.3

Specific Gravity at 72°F ----- 1.212

Respectfully submitted,

Laucks Testing Laboratories, Inc.

J. M. Owens

JMO:rw



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AKC-0015835

Laucks

Testing Laboratories, Inc.

940 South Harney St., Seattle, Washington 98108 (206)767-5060

Chemistry, Microbiology and Technical Services



Certificate

CLIENT: Alaskan Copper Works
P.O. Box 3546
Seattle, WA 98124
ATTN: Jim Brown

LABORATORY NO. 92810
DATE: Oct. 2, 1985
PO# A-6577

REPORT ON: NITRIC ACID

SAMPLE IDENTIFICATION: Submitted 9/04/85 and identified as shown below:

1) ID# 3200-A6577

TESTS PERFORMED
AND RESULTS:

Nitric Acid, % ----- 4.3

Specific Gravity at 72°F ----- 1.210

Respectfully submitted,

Laucks Testing Laboratories, Inc.

J. M. Owens
J. M. Owens

Teres Lombard

JM0:1aj



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AKC-0015836

Laucks

Testing Laboratories, Inc.

940 South Harney St., Seattle, Washington 98108 (206)767-5060



Certificate

Chemistry, Microbiology, and Technical Services

CLIENT: Alaskan Copper Works
P.O. Box 3546
Seattle, WA 98124
ATTN: Jim Brown

LABORATORY NO. 92809

DATE: Oct. 3, 1985

PO# A 6578

REPORT ON: WATER

SAMPLE IDENTIFICATION: Submitted 9/04/85 and identified as shown below:

1) ID# 3200 - A 6578

TESTS PERFORMED AND RESULTS:

parts per million (mg/L)

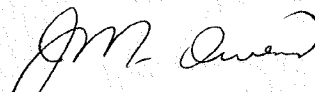
	<u>1</u>
Zinc	0.031
Chromium	<0.002
Copper	0.21
Nickel	0.39

Key

< indicates "less than"

Respectfully submitted,

Laucks Testing Laboratories, Inc.


J. M. Owens

JMO:1aj



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AKC-0015837

Laucks

Testing Laboratories, Inc.

940 South Harney St., Seattle, Washington 98108 (206)767-5060

Chemistry, Microbiology and Technical Services



Certificate

CLIENT: Alaskan Copper Works
P.O. Box 3546
Seattle, WA 98124
ATTN: Jim Brown

LABORATORY NO. 93035

DATE: Oct. 2, 1985

PO# A 6710

REPORT ON: NITRIC ACID

SAMPLE

IDENTIFICATION: Submitted 9/18/85 and identified as shown below:

1) ID# 3600-A6710

TESTS PERFORMED AND RESULTS:

Nitric Acid, % ----- 5.2

Specific Gravity at 72°F ----- 1.060

Respectfully submitted,

Laucks Testing Laboratories, Inc.


J. M. Owens

JMO:1aj



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AKC-0015838

Laucks

Testing Laboratories, Inc.

940 South Harney St., Seattle, Washington 98108 (206)767-5060



Certificate

Chemistry, Microbiology, and Technical Services

CLIENT Alaskan Copper Works
PO Box 3546
Seattle, WA 98124

LABORATORY NO. 93345

DATE October 23, 1985

A 6887

REPORT ON WATER

SAMPLE IDENTIFICATION Submitted 10-19-85 and marked:

Metro Waste Discharge ID # 3200-A6889

TESTS PERFORMED
AND RESULTS:

parts per million (mg/L)

Zinc	.087
Chromium	.63
Copper	.26
Nickel	.36

Respectfully submitted,

LAUCKS TESTING LABORATORIES, INC.


J. M. Owens

JMO:mjt



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AKC-0015839

Laucks

Testing Laboratories, Inc.

940 South Harney St., Seattle, Washington 98108 (206)767-5060



Certificate

Chemistry, Microbiology, and Technical Services

CLIENT: Alaskan Copper Works
P.O. Box 3546
Seattle, WA 98124

LABORATORY NO. 93363

DATE: Oct. 18, 1985

PO# A6888

REPORT ON: NITRIC ACID

SAMPLE

IDENTIFICATION: Submitted 10/10/85 and identified as shown below:

Nitric Acid sample Test ID 3200-A6888

TESTS PERFORMED AND RESULTS:

Nitric Acid, % ----- 23.4

Specific Gravity at 25 C ----- 1.220

DUE DATE	DISCOUNT	EXPENSE DISTR.	
PRICE OK	EXT. OK	ACCT. NO.	AMOUNT
STOCK	POSTED		
JOB/REG. NO.	AMOUNT		
JMO: APPROVAL	CAT.	ACCTNG. APP.	

Respectfully submitted,

Laucks Testing Laboratories, Inc.

J. M. Owens

RECEIVED
OCT 23 1985



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AKC-0015840

Laucks

Testing Laboratories, Inc.

940 South Harney St., Seattle, Washington 98108 (206)767-5060



Certificate

Chemistry, Microbiology, and Technical Services

CLIENT Alaskan Copper Works
P.O. Box 3546
Seattle, WA 98124
ATTN: Jim Brown

LABORATORY NO. 93770

DATE Nov. 13, 1985

P.O. #A 710~~1~~

REPORT ON WATER

SAMPLE
IDENTIFICATION

Submitted 11/4/85 and identified as shown below:

Metro Waste Discharge Test ID #3200-A7104

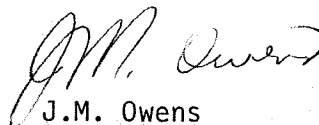
TESTS PERFORMED
AND RESULTS:

parts per million (mg/L)

Zinc	.043
Chromium	.45
Copper	.16
Nickel	.22

Respectfully submitted,

Laucks Testing Laboratories, Inc.


J.M. Owens

JMO:br



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AKC-0015841

Laucks

Testing Laboratories, Inc.

940 South Harney St., Seattle, Washington 98108 (206)767-5060



Certificate

Chemistry, Microbiology and Technical Services

CLIENT: Alaskan Copper Works
P.O. Box 3546
Seattle, WA 98124
ATTN: Jim Brown

LABORATORY NO. 93769-rev

DATE: Nov. 14, 1985

PO# A7103

REPORT ON: NITRIC ACID

SAMPLE

IDENTIFICATION: Submitted 11/04/85 and identified as shown below:

I.D. # 3200-A7103 Nitric Acid sample

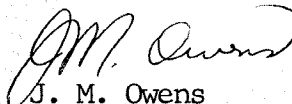
TESTS PERFORMED AND RESULTS:

Total Acidity, calculated as
% HNO₃ (methyl orange endpoint) ----- 6.3

Specific Gravity at 25°C ----- 1,222.

Respectfully submitted,

Laucks Testing Laboratories, Inc.


J. M. Owens

JMO:laj



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AKC-0015842

Laucks

Testing Laboratories, Inc.

940 South Harney St., Seattle, Washington 98108 (206)767-5060



Certificate

Chemistry, Microbiology, and Technical Services

CLIENT Alaskan Copper Works
P.O. Box 3546
Seattle, WA 98124
ATTN: Jim Brown

LABORATORY NO. 94172
DATE Dec. 9, 1985
P.O. #A7338

REPORT ON NITRIC ACID

SAMPLE IDENTIFICATION Submitted 12/4/85 and identified as shown below:
Nitric Acid Sample

TESTS PERFORMED
AND RESULTS:

Specific Gravity at 25°C ----- 1.196

Total Acidity, calculated as
% HNO₃ (methyl orange endpoint) ----- 4.3

Respectfully submitted,

Laucks Testing Laboratories, Inc.


J.M. Owens

JMO:br



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AKC-0015843

Laucks

Testing Laboratories, Inc.

940 South Harney St., Seattle, Washington 98108 (206)767-5060

Chemistry, Microbiology, and Technical Services



Certificate

CLIENT: Alaskan Copper Works
3200 6th Ave. S.
Seattle, WA 98134
ATTN: Jim Brown

LABORATORY NO. 94173

DATE: Dec. 19, 1985

P.O. #A7337

REPORT ON: WASTE DISCHARGE

SAMPLE IDENTIFICATION: Submitted 12/4/85 and identified as shown below:

TESTS PERFORMED AND RESULTS: Metro Sump Sample Waste Discharge

pH, glass electrode at 25 C ----- 12.2

parts per million (mg/L)

Oil & Grease -----	*
Arsenic -----	0.005
Cadmium -----	L/0.002
Chromium -----	3.7
Copper -----	1.1
Lead -----	0.07
Mercury -----	L/0.001
Nickel -----	1.3
Silver -----	L/0.002
Zinc -----	0.28
Cyanide -----	0.006

Key

L/ indicates "less than"

* indicates "insufficient sample"

Respectfully submitted,

Laucks Testing Laboratories, Inc.

J.M. Owens
J.M. Owens

JMO:br



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AKC-0015844